

more clearly differentiate that particular signal from other signals that are already claimed rather than to further limit the term "signal" itself. Claims 10-14 are amended to correct the fact that they were dependant upon the wrong claim. In addition, claim 10 is amended to highlight a disclosed feature, specifically a control signal that is transmitted from another receiver. The limitation of claim 17, which Applicant does not believe is anticipated by the prior art, has been incorporated into claim 15 and, therefore claim 17, as well as claim 16, is canceled. Claim 19 is amended to move a limitation from the preamble to the body of the claim and add a limitation concerning the location of the components.

New claims 24-26 are added to focus on a disclosed and previously unclaimed feature that Applicant believes is novel, i.e. a test circuitry coupled to the seismic energy detector such that the seismic energy detector can be directly stimulated for testing and calibrating the detector as well as for testing the detector's verticality.

Following entry of this Amendment claims 1-15 and 18-26 are pending.

REMARKS

Applicant would like to note that, although the Office Action states both on the Office Action Summary and in the Detailed Action (p. 3, lines 1-2) that claims 1-25 are rejected, prior to entry of this Amendment, there were only 23 claims rather than 25.

Claims 1, 15, 19, 20 and 23 stand rejected under 35 U.S.C. §102(b) as allegedly being anticipated by Orban et al. (U.S. Patent No. 6,353,577; hereinafter referred to as "Orban"). Claims 1, 2, 7, 9, 10, 12, 14-16 and 22-23 stand rejected under 35 U.S.C. §102(b) as allegedly being anticipated by Fort (U.S. Patent No. 4,320,472). Claim 15 stands rejected under 35 U.S.C. §102(b) as allegedly being anticipated by Donoho et al. (U.S. Patent No. 5,189,642; hereinafter referred to as "Donoho"). In addition, claims 1-23 stand rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Orban in view of Ward (U.S. Patent No. 4,152,691). Applicant respectfully traverses the rejections of claims 1-23.

Independent claims 1, 19, 22 and 23 have been amended to claim a disclosed feature that Applicant believes is novel. Specifically, Applicant's seismic receiver, which includes digitalization and control within the casing, is indistinguishable from standard analog seismic receivers. This feature enables the receiver to be deployed without any additional training for the

typical employee or worker who conducts the seismic survey. None of the cited art includes this feature.

Regarding the rejections of dependent claim 2, 11, 14 and 20 under 35 U.S.C. §103(a) over Orban in view of Ward, Ward can not be combined with Orban to suggest co-hosted control circuits because Ward has a centralized control circuit that services groups of sensors rather than individual sensors. For example, in Ward's Fig. 2, a sensor **group** 12 goes to A/D, which is shown as containing amplifiers, and control. It should be noted in Fig. 2 that Receiver 34 is not a seismic receiver but a receiver for receiving a signal from Ward's central control. Therefore, Ward can not be combined with Orban to teach or suggest a control within Applicant's casing because this is impossible with a centralized control structure such as Ward's. In other words, control can be either centralized for groups of seismic sensors or co-located in the casing with individual sensors, but not both. Fort also suffers from the limitations of Ward, i.e. control is centralized in a recording truck (Fig. 10) rather than in the seismic receiver itself.

In addition, there is no motivation to combine Ward and Orban. Improved S/N, reduction in the number of sensor units, and power management as well as better quality signals, lower price and ease of placement are recitations of advantages rather than motivations to combine references.

With respect to claims 11 and 15, none of the cited references teach or suggest a control signal that is transmitted from another receiver. Applicant believes that this feature provides, among other things, the ability to provide cascading control signals such that a first receiver can signal a second receiver when the first receiver is through transmitting its data. In this manner, conflicts and delays in the transmission of data are avoided without the use of a centralized control structure.

With respect to claim 21, the prior art neither teaches nor suggests a printed circuit board (PCB) that can be folded.

As mentioned above, new claims 24-26 introduce a previously unclaimed feature described in Applicant's disclosure, i.e. test circuitry coupled to the seismic energy detector such that the seismic energy detector can be directly stimulated for testing and calibrating the detector as well as for testing the detector's verticality. Although Orban shows a test circuit, Orban's test circuit is not coupled to the seismic sensor and thus can test only the feedback module and components that are upstream of the feedback module.

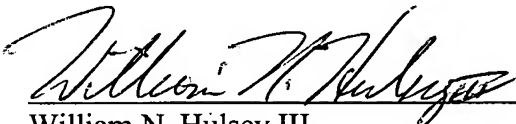
For the reasons stated above, Applicant contends that independent claims 1, 9, 15, 19, 22, 23 and 24 are allowable and respectfully request that the rejections be withdrawn. In addition to reasons stated above, dependant claims 2-8, 18, 20 and 21 are allowable because they are dependant upon allowable base claims and Applicant requests these rejections be withdrawn as well.

It is believed that no fee is due with the filing of this Response. However, if there are any fees associated with the filing of this Response, the Commissioner is hereby authorized to charge or credit any overpayment to the deposit account of Hulsey, Grether, Fortkort & Webster, LLP, Deposit Account No. 50-2726.

Respectfully submitted,

HULSEY, GRETHER, FORTKORT & WEBSTER, LLP

Dated: Dec. 14, 2003

By: 
William N. Hulsey III
Reg. No. 33,402
8911 N. Capital of Texas Hwy., Suite 3200
Austin, Texas 78759
Telephone: (512) 795-0095
Facsimile: (512) 795-9905